July 2, 2007

Dan Seybert
CTP, Division of Tube Processing Corporation
604 East LeGrande Avenue
Indianapolis, Indiana 46203

CERTIFIED MAIL: 7007 0710 0005 3965 7227

Dear Mr. Seybert: Re: Registration R097-23537-00593

The application from CTP, Division of Tube Processing Corporation received on August 22, 2006, has been reviewed. Based on the data submitted and the provisions in 326 IAC 2-5.5-2, it has been determined that the following plants are classified as registered:

This fabricated metal products operation consists of two (2) plants:

(a) Plant 1, CTP Sheetmetal, is located at 3555 Madison Avenue, Indianapolis, Indiana 46227; and

(b) Plant 2, CTP, Division of Tube Processing Corporation, is located at 3750 South Shelby Street, Indianapolis, Indiana 46227

Since the two (2) plants are adjacent, have the same two digit SIC code of 34, and are owned by one (1) company, they will be considered one (1) source, pursuant to 326 IAC 1-2-73.

The two (2) plants consist of the following registered operations:

Plant 1 – CTP Sheetmetal, 3555 Madison Avenue

(a) Eighteen (18) welding stations, identified as Emissions Unit 01, including fifteen (15) Tungsten Inert Gas (TIG) welding stations, with a maximum electrode usage capacity of 0.59 pounds of metal per hour (lb/hr), and three (3) Metal Inert Gas (MIG) welding stations, with a maximum electrode usage capacity of 1.5 pounds of metal per hour (lb/hr).

(b) Two (2) deburring operations, including one (1) hand held deburring with pneumatic tools, and one (1) vibratory deburring, with total maximum capacity of 2000 pounds of metal per hour (lb/hr).

(c) Metal presses, including hydraulic presses and mechanical presses, with a total maximum capacity of 3600 pounds per hour (lb/hr).

(d) One (1) parts washer, identified as Emissions Unit 02, using a maximum capacity of 300 gallons and a maximum cleaner usage rate of 0.025 gallons per hour.

(e) Natural gas combustion heaters identified as Emissions Unit 03 with a maximum combined heat input capacity of 5.98 million Btu per hour (mm Btu/hr). Installed in 2002.

Department of Public Works
Office of Environmental Services
2700 Belmont Avenue
Indianapolis, IN 46221
317-327-2234
Fax 327-2274
TDD 327-5186
indygov.org/dpw

Plant 2 - CTP, Division of Tube Processing Corporation 3750 South Shelby Street

(a) Two (2) acid wash lines for cleaning metal parts, identified as Emissions Unit 06. Each wash line contains two (2) acid tanks, two (2) soap tanks, and two (2) rinse tanks containing water. Some wash products contain up to five percent (5%) VOC by weight. Installed in 1976.

(b) Two (2) abrasive blast cabinets identified as Emissions Unit 07 and Emissions Unit 08. Emissions Unit 07 is a Cyclo-Blast blast cabinet utilizing steel shot as blasting media and Emissions Unit 08 is an ICM Superhone 3600 utilizing glass shot as blasting media. Each emission unit has an integral cyclone to recirculate recovered blasting media and each emission unit is equipped with a baghouse. Installed in 1974.

(c) One (1) coating booth for applying a heat resistant coating by brush. Maximum coating usage is 0.022 gallons per hour. Installed in 1974.

(d) Nine (9) MIG welding stations and five (5) TIG welding stations. Maximum electrode usage estimated at 105,208 pounds per year. Installed in 1974.

(e) One (1) thirty (30) gallon cold cleaning parts washer utilizing up to ninety (90) gallons of naptha solvent per year. Installed in 1974.

(f) Ten (10) natural gas fired space heaters with a combined maximum heat input of 1.35 MMBtu/hr. Installed in 1974.

(g) Fourteen (14) non-HAP emitting brazing stations. Installed in 1974.

The following conditions shall be applicable:

(a) Pursuant to 326 IAC 5-1-2 (Opacity Limitations) except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following:

(1) Opacity shall not exceed an average of thirty percent (30%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.

(2) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

(b) Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), particulate emissions from Emission Unit 07, shall be limited by the following:

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$E = 4.10\ P^{0.67}$ where E = rate of emission in pounds per hour and P = process weight rate in tons per hour

When operating at a process weight rate of 0.3 tons per hour, particulate emissions shall not exceed 1.83 pounds per hour.

The cyclones for Emission Unit 07 and Emission Unit 08 shall operate at all times the Cyclo-Blast abrasive blasting cabinet and the ICM Superhone 3000 abrasive blasting cabinet are in operation.

(c) Pursuant to 326 IAC 6-4 (Fugitive Dust Emissions), the Permittee shall not allow fugitive dust to escape beyond the property line or boundaries of the property, right of way, or easement on which the source is located, in a manner that would violate 326 IAC 6-4 (Fugitive Dust Emissions).

(d) Pursuant to 326 IAC 8-3-2 (Cold Cleaner Operation) the owner or operator of this cold cleaning facility shall:

(1) equip the cleaner with a cover;

(2) equip the cleaner with a facility for draining cleaned parts;

(3) close the degreaser cover whenever parts are not being handled in the cleaner;

(4) drain cleaned parts for at least fifteen (15) seconds or until dripping ceases;

(5) provide a permanent, conspicuous label summarizing the operating requirement;

(6) store waste solvent only in covered containers and not dispose of waste solvent or transfer it to another party, in such a manner that greater than twenty percent (20%) of the waste solvent (by weight) can evaporate into the atmosphere.

(e) Pursuant to 326 IAC 8-3-5 (Cold Cleaner Degreaser Operation and Control), the owner or operator of a cold cleaner degreaser facility shall ensure that the following control equipment requirements are met:

(1) Equip the degreaser with a cover. The cover must be designed so that it can be easily operated with one (1) hand if:

(A) the solvent volatility is greater than two (2) kiloPascals (fifteen (15) millimeters of mercury or three-tenths (0.3) pounds per square inch) measured at thirty-eight degrees Celsius (38°C) (one hundred degrees Fahrenheit (100°F));
(B) the solvent is agitated; or
(C) the solvent is heated.

(2) Equip the degreaser with a facility for draining cleaned articles. If the solvent volatility is greater than four and three-tenths (4.3) kiloPascals (thirty-two (32) millimeters of mercury or six-tenths (0.6) pounds per square inch) measured at thirty-eight degrees Celsius (38°C) (one hundred degrees Fahrenheit (100°F)), then the drainage facility must be internal such that articles are enclosed under the cover while draining. The drainage facility may be external for applications where an internal type cannot fit into the cleaning system.

(3) Provide a permanent, conspicuous label which lists the operating requirements outlined in subsection (b).

(4) The solvent spray, if used, must be a solid, fluid stream and shall be applied at a pressure which does not cause excessive splashing.

(5) Equip the degreaser with one (1) of the following control devices if the solvent volatility is greater than four and three-tenths (4.3) kiloPascals (thirty-two (32) millimeters of mercury or six-tenths (0.6) pounds per square inch) measured at thirty-eight degrees Celsius (38°C) (one hundred degrees Fahrenheit (100°F)), or if the solvent is heated to a temperature greater than forty-eight and nine-tenths degrees Celsius (48.9°C) (one hundred twenty degrees Fahrenheit (120°F)):

(A) A freeboard that attains a freeboard ratio of seventy-five hundredths (0.75) or greater.
(B) A water cover when solvent used is insoluble in, and heavier than water.
(C) Other systems of demonstrated equivalent control such as a refrigerated chiller or carbon adsorption. Such systems shall be submitted to the U.S. EPA as a SIP revision.

(6) The owner or operator of a cold cleaning facility shall ensure that the following operating requirements are met:

(A) Close the cover whenever articles are not being handled in the degreaser.
(B) Drain cleaned articles for at least fifteen (15) seconds or until dripping ceases.
(C) Store waste solvent only in covered containers and prohibit the disposal or transfer of waste solvent in any manner in which greater than twenty percent (20%) of the waste solvent by weight could evaporate.

This registration is the first air approval issued to this source. The source may operate according to 326 IAC 2-5.5.

An authorized individual shall provide an annual notice to the Indiana Department of Environmental Management (IDEM) Office of Air Quality (OAQ) and the City of Indianapolis Office of Environmental Services (OES) that the source is in operation and in compliance with this registration pursuant to 326 IAC 2-5.5-4(a)(3). The annual notice shall be submitted to:

Compliance Data Section
Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, IN 46204

and

Office of Environmental Service, Compliance Data Group
City of Indianapolis
2700 S. Belmont Avenue
Indianapolis, IN 46221

no later than March 1 of each year, with the annual notice being submitted in the format attached.

An application or notification shall be submitted in accordance with 326 IAC 2 to the OES and IDEM, Office of Air Quality (OAQ) if the source proposes to construct new emission units, modify existing emission units, or otherwise modify the source. If you have any questions, please contact Mark Caraher of my staff at 327-2272 or mcaraher@indygov.org.

Sincerely,

ORIGINAL SIGNED BY:

Felicia A. Robinson,
Administrator
Office of Environmental Services

mbc

cc: Files
Air Compliance, Matt Mosier
IDEM, Mindy Hahn
Marion County Health Department
Permits

Registration
Annual Notification

This form should be used to comply with the notification requirements under 326 IAC 2-5.5-4(a)(3).

Company Name:	**CTP, Division of Tube Processing Corporation**
Address:	**Plant 1: CTP Sheetmetal, 3555 Madison Avenue; and** **Plant 2: CTP, Division of Tube Processing Corporation, 3750 South Shelby Street**
City:	**Indianapolis, Indiana 46227**
Phone #:	**(317) 782-9628**
Registration #:	**R097-23537-00593**

Certification by the Authorized Individual
I hereby certify that CTP, Division of Tube Processing Corporation is still in operation and is in compliance with the requirements of Registration **R097-23537-00593**. **Name (typed):**
Title:
Signature:
Date:

Indiana Department of Environmental Management
Office of Air Quality

and

Indianapolis Office of Environmental Services

Technical Support Document (TSD) for a Registration

Source Background and Description

Source Name:	**CTP, Division of Tube Processing Corporation**
Source Location:	**Plant 1: 3555 Madison Avenue, Indianapolis, Indiana 46227** **Plant 2: 3750 South Shelby Street, Indianapolis, Indiana 46227**
County:	**Marion**
SIC Code:	**Plant 1: 3498** **Plant 2: 3499**
Registration No.:	**R097-23537-00593**
Permit Reviewer:	**M. Caraher**

The Office of Air Quality (OAQ) and Indianapolis Office of Environmental Services (OES) have reviewed a Registration application from CTP, Division of Tube Processing Corporation relating to a fabricated metal products operation, except machinery and transportation equipment.

Source Definition

This fabricated metal products operation consists of two (2) plants:

(a) Plant 1, CTP Sheetmetal, is located at 3555 Madison Avenue, Indianapolis, Indiana 46227 and was issued Exemption, E097-23219-00438, on August 17, 2006; and

(b) Plant 2, CTP, Division of Tube Processing Corporation, is located at 3750 South Shelby Street, Indianapolis, Indiana 46227.

Since the two (2) plants are adjacent, have the same two digit SIC code of 34, and are owned by one (1) company, they will be considered one (1) source, pursuant to 326 IAC 1-2-73.

Previously Exempt Emission Units and Pollution Control Equipment

The source consists of the following emission units and pollution control devices included in Exemption No. E097-23219-00438:

Plant 1, CTP Sheetmetal, located at 3555 Madison Avenue, Indianapolis, Indiana 46227:

(a) Eighteen (18) welding stations, identified as Emissions Unit 01, including fifteen (15) Tungsten Inert Gas (TIG) welding stations, with a maximum electrode usage capacity of 0.59 pounds of metal per hour (lb/hr), and three (3) Metal Inert Gas (MIG) welding stations, with a maximum electrode usage capacity of 1.5 pounds of metal per hour (lb/hr).

(b) Two (2) deburring operations, including one (1) hand held deburring with pneumatic tools, and one (1) vibratory deburring, with total maximum capacity of 2000 pounds of metal per hour (lb/hr).

(c) Metal presses, including hydraulic presses and mechanical presses, with a total maximum capacity of 3600 pounds per hour (lb/hr).

(d) One (1) parts washer, identified as Emissions Unit 02, using a maximum capacity of 300 gallons and a maximum cleaner usage rate of 0.025 gallons per hour.

(e) Natural gas combustion heaters identified as Emissions Unit 03 with a maximum combined heat input capacity of 5.98 million Btu per hour (mm Btu/hr). Installed in 2002.

Unpermitted Emission Units and Pollution Control Equipment

The source also consists of the following unpermitted emission units:

Plant 2, CTP, Division of Tube Processing Corporation, located at 3750 South Shelby Street, Indianapolis, Indiana 46227:

(a) Two (2) acid wash lines for cleaning metal parts, identified as Emissions Unit 06. Each wash line contains two (2) acid tanks, two (2) soap tanks, and two (2) rinse tanks containing water. Some wash products contain up to five percent (5%) VOC by weight. Installed in 1976.

(b) Two (2) abrasive blast cabinets identified as Emissions Unit 07 and Emissions Unit 08. Emissions Unit 07 is a Cyclo-Blast blast cabinet utilizing steel shot as blasting media and Emissions Unit 08 is an ICM Superhone 3600 utilizing glass shot as blasting media. Each emission unit has an integral cyclone to recirculate recovered blasting media and each emission unit is equipped with a baghouse. Installed in 1974.

(c) One (1) coating booth for applying a heat resistant coating by brush. Maximum coating usage is 0.022 gallons per hour. Installed in 1974.

(d) Nine (9) MIG welding stations and five (5) TIG welding stations. Maximum electrode usage estimated at 105,208 pounds per year. Installed in 1974.

(e) One (1) thirty (30) gallon cold cleaning parts washer utilizing up to ninety (90) gallons of naptha solvent per year. Installed in 1974.

(f) Ten (10) natural gas fired space heaters with a combined maximum heat input of 1.35 MMBtu/hr. Installed in 1974.

(g) Fourteen (14) non-HAP emitting brazing stations. Installed in 1974.

Existing Approvals

The source has constructed or has been operating under the following previous approvals:

(a) Exemption E097-16050-00438 for Plant 1, issued on March 10, 2003; and

(b) Exemption E097-23219-00438 for Plant 1, issued on August 17, 2006.

All conditions from previous approvals were incorporated into this Registration.

Justification for the Registration

With the addition of Plant 2 collocated emission units to Plant 1, this existing source is required to obtain a permit under 326 IAC 2 (Permit Review Rules) because the potential to emit particulate matter (PM) and particulate matter less than ten (10) microns (PM10) are each greater than five (5) tons per year and less than twenty five (25) tons per year (see TSD Appendix A pages 1 through 13). Therefore, this source qualifies as a Registration under 326 IAC 2-5.5-1(b). A Registration, R097-23537-00593, will be issued for the addition of Plant 2 to the existing Plant 1 operation.

Air Pollution Control Justification as an Integral Part of the Process

The company has submitted the following justification such that the cyclones for each of the two (2) abrasive blast cabinets identified as Emissions Unit 07 and Emissions Unit 08 be considered as an integral part of the abrasive blasting process.

(a) The primary purpose of each cyclone is not to control air pollution. The primary purpose of each cyclone is to recover blasting media from the process so that it can be recirculated in each of the two (2) abrasive blast cabinets. Each abrasive blast cabinet is designed to recover and recirculate the blast media such that new blasting media does not need to be continually introduced into abrasive blast cabinet operation. The baghouse associated with each abrasive blast cabinet is then utilized to control particulate emissions from each cyclone's exhaust.

IDEM, OAQ, and OES have evaluated the justifications and agreed that the cyclones for each of the two (2) abrasive blast cabinets identified as Emissions Unit 07 and Emissions Unit 08 will be considered as an integral part of each abrasive blast cabinet. Therefore, the permitting level will be determined using the potential to emit after the cyclone in each abrasive blasting process. Operating conditions in the Registration will specify that the cyclones for each of the two (2) abrasive blast cabinets identified as Emissions Unit 07 and Emissions Unit 08 shall operate at all times when the abrasive blasting process is in operation.

Enforcement Issue

(a) IDEM, OAQ, and OES are aware that equipment has been constructed and operated prior to receipt of the proper permit. The subject equipment is listed in this Technical Support Document under the condition entitled "Unpermitted Emission Units and Pollution Control Equipment".

(b) IDEM, OAQ, and OES are reviewing this matter and will take appropriate action. This Registration is intended to satisfy the requirements of the construction permit rules.

Recommendation

The staff recommends to the Administrator that the Registration be approved. This recommendation is based on the following facts and conditions:

Unless otherwise stated, information used in this review was derived from the application received on August 22, 2006 and additional information submitted by the applicant on October 25, 2006 and on May 22, 2007. An OES tour of abrasive blasting operations at Plant 2, located at 3750 South Shelby Street, was conducted on November 20, 2006 and verified the operational purpose of the cyclones for each of the two (2) abrasive blast cabinets identified as Emissions Unit 07 and Emissions Unit 08.

There was no notice of completeness letter mailed to the Permittee.

Emission Calculations

The calculations submitted by the applicant have been verified and found to be accurate and correct. These calculations are provided in Appendix A of this document (see Appendix A pages 1 through 13).

Potential to Emit of the Source Before and after the Addition of Plant 2: 3750 South Shelby Street, Indianapolis, Indiana 46227

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as "the maximum capacity of a stationary source or emissions unit to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, inclulding air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U.S. EPA, the department, or the appropriate local air pollution control agency."

	Existing Plant 1 (Madison Avenue) Emissions	**Unpermitted Plant 2 (Shelby Street) Emissions**	**Combined Emissions**
Pollutant	**Potential to Emit (tons/year)**	**Potential to Emit (tons/year)**	**Potential to Emit (tons/year)**
PM	0.74	7.15	7.89
PM10	0.89	6.46	7.34
SO_2	0.02	0.00	0.02
VOC	1.15	3.00	4.14
CO	2.20	0.50	2.70
NO_X	2.62	0.59	3.21
Highest Single HAP	0.05 (Hexane)	0.02 (Manganese)	0.05 (Hexane)
Combination HAP	0.08	0.05	0.13

(a) The potential to emit (as defined in 326 IAC 2-7-1(29)) of PM and PM10 are greater than five (5) tons per year and less than 25 tons per year. Therefore, the source is subject to the provisions of 326 IAC 2-5.5. A Registration will be issued.

(b) The potential to emit (as defined in 326 IAC 2-7-1(29)) of any single HAP is less than ten (10) tons per year and the potential to emit (as defined in 326 IAC 2-7-1(29)) of any combination of HAPs is less than twenty-five (25) tons per year. Therefore, the source is not subject to the provisions of 326 IAC 2-7. A Registration will be issued.

(c) Fugitive Emissions
Since this type of operation is not one of the twenty-eight (28) listed source categories under 326 IAC 2-2 and since there are no applicable New Source Performance Standards that were in effect on August 7, 1980, the fugitive particulate matter (PM) and volatile organic compound (VOC) emissions are not counted toward determination of PSD and Emission Offset applicability.

Actual Emissions

No previous emission data has been received from the source.

County Attainment Status

The source is located in Marion County.

Pollutant	Status
PM2.5	nonattainment
PM10	attainment
SO_2	maintenance attainment
NO_X	attainment
8-hour Ozone	basic nonattainment
CO	attainment
Lead	attainment

(a) Volatile organic compounds (VOC) and Nitrogen Oxides (NO_X) are regulated under the Clean Air Act (CAA) for the purposes of attaining and maintaining the National Ambient Air Quality Standards (NAAQS) for ozone. Therefore, VOC and NO_X emissions are considered when evaluating the rule applicability relating to the ozone standards. Marion County has been designated as nonattainment of the 8-hour ozone standard. Therefore, VOC and NO_X emissions were reviewed pursuant to the requirements for Emission Offset, 326 IAC 2-3.

(b) Marion County has been classified as nonattainment for PM2.5 in 70 FR 943 dated January 5, 2005. Until U.S. EPA adopts specific New Source Review rules for PM2.5 emissions, it has directed states to regulate PM10 emissions as a surrogate for PM2.5 emissions pursuant to the Nonattainment New Source Review requirements. See the State Rule Applicability – Entire Source section.

(c) Marion County has been classified as attainment or unclassifiable for all other criteria pollutants. Therefore, PM10, SO_2, Lead and CO emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration, 326 IAC 2-2.

(d) On October 25, 2006, the Indiana Air Pollution Control Board finalized a rule revision to 326 IAC 1-4-1 revoking the one-hour ozone standard in Indiana.

Source Status

Existing Source PSD, Emission Offset, Part 70, or FESOP Definition (emissions after controls, based on 8760 hours of operation per year at rated capacity and/or as otherwise limited):

Pollutant	Emissions (tons/yr)
PM	7.89
PM10	7.34
SO_2	0.02
VOC	4.14
CO	2.7
NO_X	3.21
Single HAP	0.05
Combination HAPs	0.13

(a) This existing source is **not** a major stationary source under 326 IAC 2-2 (Prevention of Significant Deterioration (PSD) Requirements) because no attainment regulated pollutant is emitted at a rate of 250 tons per year or greater and it is not in one of the 28 listed source categories.

(b) This existing source is **not** a major stationary source under 326 IAC 2-3 (Emission Offset) because no nonattainment regulated pollutant is emitted at a rate of 100 tons per year or greater and it is not in one of the 28 listed source categories.

(c) These emissions were based on the application submitted by the company.

Part 70 Permit Conditions

This existing source, including the emissions from Plant 2 located at 3750 South Shelby Street, Indianapolis, Indiana, is still not subject to the Part 70 Permit requirements because the potential to emit (PTE) of:

(a) each criteria pollutant is less than 100 tons per year,
(b) a single hazardous air pollutant (HAP) is less than 10 tons per year, and
(c) any combination of HAPs is less than 25 tons per year.

This status is based on all the air approvals issued to the source.

Federal Rule Applicability

(a) There are no New Source Performance Standards (NSPS) (326 IAC 12 and 40 CFR Part 60) included in this Registration.

(b) There are no National Emission Standards for Hazardous Air Pollutants (NESHAP) 326 IAC 14, 20 and 40 CFR Part 63, included in this Registration.

State Rule Applicability – Entire Source

326 IAC 1-7 (Stack Height Provisions)

This source does not have potential or actual PM or SO_2 emissions greater than twenty (25) tons per year. Therefore, the source is not subject to 326 IAC 1-7 (Stack Height Provisions).

326 IAC 2-1.1-5 (Air Quality Requirements)

Marion County has been designated as nonattainment for PM2.5. According to an EPA guidance memo dated April 5, 2005, PM10 is to be utilized as a surrogate for PM2.5 until the EPA can promulgate the PM2.5 implementation rule. PM10 emissions, and therefore PM2.5 emissions, from this source are less than one hundred (100) tons per twelve consecutive month period. There have been no modifications to this source such that it is a major source of PM10 emissions. Therefore, this source is not subject to nonattainment new source review requirements for PM2.5 emissions.

326 IAC 2-2 (Prevention of Significant Deterioration (PSD) Requirements) and 326 IAC 2-3 (Emission Offset)

This existing source is not a major stationary source under 326 IAC 2-2 (Prevention of Significant Deterioration (PSD) Requirements) or 326 IAC 2-3 (Emission Offset) because no attainment regulated pollutant emissions are equal to or greater than two hundred fifty (250) tons per year, this source is not one of the 28 listed source categories under 326 IAC 2-2 or 326 IAC 2-3 and no attainment or nonattainment regulated pollutant emissions are equal to or greater than one hundred (100) tons per year. There have been no modifications or revisions to this source that were major modifications pursuant to 326 IAC 2-2 or 326 IAC 2-3. Therefore, 326 IAC 2-2 (Prevention of Significant Deterioration (PSD) Requirements) and 326 IAC 2-3 (Emission Offset) are each not applicable to the source.

326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants)

This existing source commenced operation prior to July 27, 1997 and does not have the potential to emit any individual single hazardous air pollutant (HAP) equal to or greater than ten (10) tons per year nor does this source have the potential to emit HAP of equal to or greater than twenty-five (25) tons per year for any combination of HAP. This source did not undergo construction or reconstruction of a major HAP source after July 27, 1997. Therefore, this source is not subject to 326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants).

326 IAC 2-5.5 (Registrations)

This existing source has the potential to emit equal to or greater than five (5) tons per year but less than twenty five (25) tons per year of particulate matter (PM) and particulate matter less than ten (10) microns (PM10). Therefore, this existing source is subject to the provisions of 326 IAC 2-5.5 (Registrations). Pursuant to 326 IAC 2-5.5-1(c), no existing source shall operate without registering the source with the commissioner. Registration R097-23537-00593 satifies the requirements of 326 IAC 2-5.5 (Registrations).

326 IAC 2-6 (Emission Reporting)

This source is located in Marion County and does not have the potential to emit of any individual single hazardous air pollutant (HAP) equal to or greater than ten (10) tons per year nor does this source have the potential to emit HAP of equal to or greater than twenty-five (25) tons per year for any combination of HAP. This source does not have the potential to emit of any criteria pollutant equal to or greater than one hundred (100) tons per year. Therefore, 326 IAC 2-6 does not apply to the source.

326 IAC 4-2 (Incinerators)

This source does not have an incinerator. Therefore, this source is not subject to 326 IAC 4-2 (Incinerators).

326 IAC 5-1 (Opacity Limitations)

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Exemptions), opacity shall meet the following, unless otherwise stated in the permit:

(a) Opacity shall not exceed an average of thirty percent (30%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.

(b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

326 IAC 6.5-1-2 (Particulate Matter Limitations Except Lake County) and 326 IAC 6.5-6 (Marion County)

This source has the potential to emit particulate of less than one hundred (100) tons per year and has actual emissions less than ten (10) tons per year. CTP, Division of Tube Processing Corporation is not specifically identified in 326 IAC 6.5-6 (Marion County). Therefore, 326 IAC 6.5-1-2 (Particulate Matter Limitations Except Lake County) and 326 IAC 6.5-6 (Marion County) each do not apply to this source.

326 IAC 6-2-4 (Particulate Emission Limitations for Facilities Specified in 326 IAC 6-2-1(d))

This source has no indirect heating emission units because no emission unit at this source produces usable heat that is to be transferred through a heat conducting materials barrier or by a heat storage medium to a material to be heated so that the material being heated is not contacted by, and adds no substance to the products of combustion. Therefore, 326 IAC 6-2-4 (Particulate Emission Limitations for Facilities Specified in 326 IAC 6-2-1(d)) does not apply to this source.

326 IAC 6-4 (Fugitive Dust Emissions)

This source is subject to the provisions of 326 IAC 6-4 for fugitive dust emissions. The Permittee shall not allow fugitive dust to escape beyond the property line or boundaries of the property, right of way, or easement on which the source is located, in a manner that would violate 326 IAC 6-4 (Fugitive Dust Emissions).

326 IAC 6-5 (Fugitive Particulate Matter Emissions)

This source does not have the potential to emit fugitive particulate matter equal to or greater than twenty five (25) tons per year. Therefore, this source is not subject to 326 IAC 6-5 (Fugitive Particulate Matter Emissions).

326 IAC 7 (Sulfur Dioxide Rules)

Neither the source or any specific emission unit at this source has the potential to emit twenty five (25) tons per year or ten (10) pounds per hour of sulfur dioxide (SO_2). Therefore, this source is not subject to 326 IAC 326 IAC 7 (Sulfur Dioxide Rules).

326 IAC 7-4-2 (Marion County Sulfur Dioxide Emission Limitations)

Neither the source or any specific emission unit at this source is specifically identified in 326 IAC 7-4-2. Therefore, 326 IAC 7-4-2 (Marion County Sulfur Dioxide Emission Limitations) does not apply to this source.

326 IAC 8 (Volatile Organic Compound Rules)

See discussion under State Rule Applicability – Individual Facilities of this Technical Support Document.

326 IAC 9 (Carbon Monoxide Emission Rules)

There are no provisions under 326 IAC 9 (Carbon Monixide Emission Rules) applicable to any specific emission unit or operation at this source. Therefore, this source is not subject to 326 IAC 9 (Carbon Monoxide Emission Rules).

326 IAC 10 (Nitrogen Oxide Rules)

There are no provisions under 326 IAC 10 (Nitrogen Oxide Rules) applicable to any specific emission unit or operation at this source. This source has not opted in to 326 IAC 10 (Nitrogen Oxide Rules). Therefore, this source is not subject to 326 IAC 10 (Nitrogen Oxide Rules).

326 IAC 11 (Emission Limitations for Specific Types of Operations)

This fabricated metal products, except machinery and transportation equipment, operation does not perform any specific type of operation identified in 326 IAC 11 (Emission Limitations for Specific Types of Operations). Therefore, this source is not subject to 326 IAC 11 (Emission Limitations for Specific Types of Operations).

326 IAC 12 (New Source Performance Standards)

See discussion under Federal Rule Applicability of this Technical Support Document.

326 IAC 14 (Emission Standards for Hazardous Air Pollutants)

There are no provisions under 326 IAC 14 (Emission Standards for Hazardous Air Pollutants) and 40 CFR Part 61 (National Emission Standards for Hazardous Air Pollutants) applicable to any specific emission unit or operation at this source. Therefore, this source is not subject to the provisions of 326 IAC 14 (Emission Standards for Hazardous Air Pollutants) and 40 CFR Part 61 (National Emission Standards for Hazardous Air Pollutants).

326 IAC 15 (Lead Rules)

CTP, Division of Tube Processing Corporation, is not specifically identified in 326 IAC 15 (Lead Rules) and there are no provisions under 326 IAC 15 (Lead Rules) applicable to any specific

emission unit or operation at this source. Therefore, this source is not subject to 326 IAC 15 (Lead Rules).

326 IAC 17 (Public Records; Confidential Information; Confidentiality Agreements)
This source has not filed or claimed any application, source or permit information as confidential, pursuant to 326 IAC 17-1-6 (Public Records: Confidentiality Claims), for this review and issuance, R097-23537-00593.

326 IAC 20 (Hazardous Air Pollutants)
This source is not a major source of hazardous air pollutants (HAP) and does not perform operations specifically identified in 326 IAC 20. Therefore, this source is not subject to 326 IAC 20 (Hazardous Air Pollutants) and 40 CFR Part 63 (National Emission Standards for Hazardous Air Pollutants).

326 IAC 21 (Acid Deposition Control)
CTP, Division of Tube Processing Corporation, is not subject to the Acid Rain Program Provisions of Title IV of the 1990 Clean Air Act Amendments as listed in 40 CFR Part 72 through 78 and are, therefore, not subject to 326 IAC 21 (Acid Deposition Control).

State Rule Applicability – Individual Facilities

Surface Coating, Welding, Abrasive Blasting, Deburring, Metal Presses, Space Heaters

326 IAC 6-3 (Particulate Emission Limitations for Manufacturing Processes)
Pursuant to the provisions of 326 IAC 6-3-1(b) (Particulate Emission Limitations for Manufacturing Processes), surface coating using brush coating, welding operations consuming less than 625 pounds of rod or wire per day, and manufacturing processes with potential emissions less than 0.551 pounds per hour are exempt from the requirements of 326 IAC 6-3 (Particulate Emission Limitations for Manufacturing Processes).

This source performs brush coating of metal parts in the surface coating operation. Welding operations do not exceed 625 pounds of rod or wire per day (see TSD Appendix A pages 5 and 11 of 13). Deburring, Metal Presses and Brazing each have potential particulate emissions less than 0.551 pounds per hour (see TSD Appendix A page 12 of 13). Gaseous fuels used in Plant 1 and Plant 2 space heaters are not part of the process weight rate as defined in 326 IAC 1-2-59. Therefore, 326 IAC 6-3 (Particulate Emission Limitations for Manufacturing Processes) does not apply to these operations at the source.

With the use of an integral cyclone, Emission Unit 08 (the ICM Superhone 3000 abrasive blasting cabinet at Plant 2 (Shelby Street)) has potential particulate emissions less than 0.551 pounds per hour (see TSD Appendix A pages 3 of 13). Therefore, 326 IAC 6-3 (Particulate Emission Limitations for Manufacturing Processes) does not apply to Emission Unit 08.

With the use of an integral cyclone, Emission Unit 07 (the Cyclo-Blast abrasive blasting cabinet at Plant 2 (Shelby Street)), has potential particulate emissions of greater than 0.551 pounds per hour (see TSD Appendix A page 2 of 13). Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the particulate emissions from Emission Unit 07, shall be limited by the following:

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$E = 4.10\ P^{0.67}$ where E = rate of emission in pounds per hour and
P = process weight rate in tons per hour

When operating at a process weight rate of 0.3 tons per hour (600 pounds per hour; see TSD Appendix A page 2 of 13), particulate emissions shall not exceed 1.83 pounds per hour. The potential to emit particulate after the integral cyclone for Emission Unit 07 is less than 1.83 pounds per hour. Therefore, Emission Unit 07 is in compliance with 326 IAC 6-3 (Particulate Emission Limitations for Manufacturing Processes).

The cyclones for Emission Unit 07 and Emission Unit 08 shall operate at all times the Cyclo-Blast abrasive blasting cabinet and the ICM Superhone 3000 abrasive blasting cabinet are in operation.

Surface Coating

326 IAC 8-2 (Surface Coating Emission Limitations)

The one (1) coating booth in Plant 2 for applying a heat resistant coating by brush has actual VOC emissions less than 15 pounds per day (see TSD page 4 of 13). Therefore, the one (1) coating booth in Plant 2 is not subject to 326 IAC 8-2 (Surface Coating Emission Limitations).

Cold cleaning parts washers at Plant 1 and Plant 2

326 IAC 8-3-2 (Cold Cleaner Operation)

Pursuant to 326 IAC 8-3-2 (Cold Cleaner Operation) the owner or operator of this cold cleaning facility shall:

(1) equip the cleaner with a cover;

(2) equip the cleaner with a facility for draining cleaned parts;

(3) close the degreaser cover whenever parts are not being handled in the cleaner;

(4) drain cleaned parts for at least fifteen (15) seconds or until dripping ceases;

(5) provide a permanent, conspicuous label summarizing the operating requirement;

(6) store waste solvent only in covered containers and not dispose of waste solvent or transfer it to another party, in such a manner that greater than twenty percent (20%) of the waste solvent (by weight) can evaporate into the atmosphere.

326 IAC 8-3-5 (Cold Cleaner Degreaser Operation and Control)

Pursuant to 326 IAC 8-3-5 (Cold Cleaner Degreaser Operation and Control), the owner or operator of a cold cleaner degreaser facility shall ensure that the following control equipment requirements are met:

(1) Equip the degreaser with a cover. The cover must be designed so that it can be easily operated with one (1) hand if:

(A) the solvent volatility is greater than two (2) kiloPascals (fifteen (15) millimeters of mercury or three-tenths (0.3) pounds per square inch) measured at thirty-eight degrees Celsius (38°C) (one hundred degrees Fahrenheit (100°F));
(B) the solvent is agitated; or
(C) the solvent is heated.

(2) Equip the degreaser with a facility for draining cleaned articles. If the solvent volatility is greater than four and three-tenths (4.3) kiloPascals (thirty-two (32) millimeters of mercury or six-tenths (0.6) pounds per square inch) measured at thirty-eight degrees Celsius (38°C) (one hundred degrees Fahrenheit (100°F)), then the drainage facility must be internal such that articles are enclosed under the cover while draining. The drainage facility may be external for applications where an internal type cannot fit into the cleaning system.

(3) Provide a permanent, conspicuous label which lists the operating requirements outlined in subsection (b).

(4) The solvent spray, if used, must be a solid, fluid stream and shall be applied at a pressure which does not cause excessive splashing.

(5) Equip the degreaser with one (1) of the following control devices if the solvent volatility is greater than four and three-tenths (4.3) kiloPascals (thirty-two (32) millimeters of mercury or six-tenths (0.6) pounds per square inch) measured at thirty-eight degrees Celsius (38°C) (one hundred degrees Fahrenheit (100°F)), or if the solvent is heated to a temperature greater than forty-eight and nine-tenths degrees Celsius (48.9°C) (one hundred twenty degrees Fahrenheit (120°F)):

(A) A freeboard that attains a freeboard ratio of seventy-five hundredths (0.75) or greater.
(B) A water cover when solvent used is insoluble in, and heavier than water.
(C) Other systems of demonstrated equivalent control such as a refrigerated chiller or carbon adsorption. Such systems shall be submitted to the U.S. EPA as a SIP revision.

(6) The owner or operator of a cold cleaning facility shall ensure that the following operating requirements are met:

(A) Close the cover whenever articles are not being handled in the degreaser.
(B) Drain cleaned articles for at least fifteen (15) seconds or until dripping ceases.
(C) Store waste solvent only in covered containers and prohibit the disposal or transfer of waste solvent in any manner in which greater than twenty percent (20%) of the waste solvent by weight could evaporate.

Conclusion

This fabricated metal products operation, except machinery and transportation equipment, shall be subject to the conditions of Registration **R097-23537-00593.**

Appendix A: Emissions Calculations

Wash Lines in Plant 2

Company Name: CTP, Division of Tube Processing Corporation
Address City IN Zip: Plant 1: 3555 Madison Avenue, Indianapolis, Indiana 46227
Plant 2: 3750 South Shelby Street, Indianapolis, Indiana 46227
Permit Number: R097-23537-00593
Reviewer: M. Caraher
Date: 11/3/2006

Description of Wash Lines:

CTP has 2 acid wash lines for cleaning metal parts. Each wash line contains 2 acid tanks, 2 soap tanks, and 2 rinse tanks containing water.

These lines use the following products in significant quantity: Scumbugs SAA1.1, Acid Cleaner 5557, Anti Rust 6514A, and Anti Rust 8133CH1.

VOC Containing Product Information:

Product Name	Anti Rust 8133CH1
Product Mfg	Mid-State Chemical & Supply Corp.
Specific Gravity (1)	0.80
Product Density [lb/gal] (2)	6.67
Est. VOC Content [wt. %] (1)	5%
Actual 2005 Product Usage [gal/yr]	4,620
Hours of Operation [hr/yr] (3)	4,590
Avg. Product Usage [gal/hr] (4)	1.0
Max. Product Usage [gal/hr] (5)	1.5
Max. Product Usage [lb/hr] (6)	10.1

Potential Emissions:

Potential VOC Emissions [lb/hr] (7)	0.50
Potential VOC Emissions [lb/day] (8)	12.1
Potential VOC Emissions [tpy] (9)	2.21

Additional Information:

(1) This data was obtained from the manufacturer's MSDS for this product. Product contains 1 to 5% 2-Butoxyethanol. Used upper end of range for PTE calculation.

(2) Coating Density [lb/gal] = Specific Gravity x 8.34 lb/gal

(3) Hours of Operation [hr/yr] = 18 hr/day x 5 day/wk x 51 wk/yr

(4) Avg. Product Usage [gal/hr] = Actual 2005 Product Usage [gal/yr] / Hours of Operation [hr/yr]

(5) Max. Product Usage [gal/hr] = Avg. Product Usage [gal/hr] x 1.5 Safety Factor

(6) Max. Product Usage [lb/hr] = Max. Product Usage [gal/hr] x Product Density [lb/gal]

(7) Potential VOC Emissions [lb/hr] = Max. Product Usage [lb/hr] x Est. VOC Content [wt. %]

(8) Potential VOC Emissions [lb/day] = Potential VOC Emissions [lb/hr] x 24 hr/day

(9) Potential VOC Emissions [tpy] = Potential VOC Emissions [lb/hr] x 8,760 hr/yr / 2,000 lb/ton

Appendix A: Emissions Calculations
Blasting in Plant 2

Company Name: CTP, Division of Tube Processing Corporation
Address City IN Zip: Plant 1: 3555 Madison Avenue, Indianapolis, Indiana 46227
Plant 2: 3750 South Shelby Street, Indianapolis, Indiana 46227
Permit Number: R097-23537-00593
Reviewer: M. Caraher
Date: 11/3/2006

Emission Unit 07 - Cyclo-Blast using Steel Shot

Table 1 - Emission Factors for Abrasives

	Emission Factor	
Abrasive	lb PM / lb abrasive	lb PM10 / lb PM
Sand	0.041	0.70
Grit	0.010	0.70
Steel Shot	0.004	0.86
Other	0.010	

Table 2 - Density of Abrasives (lb/ft3)

Abrasive	Density (lb/ft3)
Al oxides	160
Sand	99
Steel	487

Table 3 - Sand Flow Rate (FR1) Through Nozzle (I

Flow rate of Sand Through a Blasting Nozzle as a Function of Nozzle pressure and Internal Di

	Nozzle Pressure (psig)							
Internal dian	30	40	50	60	70	80	90	100
1/8	28	35	42	49	55	63	70	77
3/16	65	80	94	107	122	135	149	165
1/4	109	138	168	195	221	255	280	309
5/16	205	247	292	354	377	420	462	507
3/8	285	355	417	477	540	600	657	720
7/16	385	472	560	645	755	820	905	940
1/2	503	615	725	835	945	1050	1160	1265
5/8	820	990	1170	1336	1510	1680	1850	2030
3/4	1140	1420	1670	1915	2160	2400	2630	2880
1	2030	2460	2900	3340	3780	4200	4640	5060

Calculations

Adjusting Flow Rates for Different Abrasives and Nozzle Diameters

Flow Rate (FR) = Abrasive flow rate (lb/hr) with internal nozzle diameter (ID)	
FR1 = Sand flow rate (lb/hr) with internal nozzle diameter (ID1) From Table 3 =	600
D = Density of abrasive (lb/ft3) From Table 2 =	487
D1 = Density of sand (lb/ft3) =	99
ID = Actual nozzle internal diameter (in) =	0.375
ID1 = Nozzle internal diameter (in) from Table 3 =	0.375

Flow Rate (FR) (lb/hr) = **2951.515** per nozzle

Uncontrolled Emissions (E, lb/hr)

EF = emission factor (lb PM/ lb abrasive) From Table 1 =				0.004	
FR = Flow Rate (lb/hr) =				2951.52	
w = fraction of time of wet blasting =				0	%
N = number of nozzles =				1	
Integral Cyclone Efficiency =	90 %				
Baghouse Efficiency =	99 %		**PM**	**PM10**	
		PTE After Integral Cyclone =	**1.18**	**1.015**	**lbs/hr**
			5.17	**4.447**	**tons/yr**

		PM	**PM10**	
	Controlled Emissions =	**0.01**	**0.01**	**lbs/hr**
		0.05	**0.05**	**tons/yr**

METHODOLOGY

Emission Factors from STAPPA/ALAPCO "Air Quality Permits", Vol. I, Section 3 "Abrasive Blasting" (1991 edition)
Ton/yr = lb/hr X 8760 hr/yr X ton/2000 lb
Flow Rate (FR) (lb/hr) = FR1 x (ID/ID1)2 x (D/D1)
E = EF x FR x (1-w/200) x N
w should be entered in as a whole number (if w is 50%, enter 50)

Blasting in Plant 2

Company Name: **CTP, Division of Tube Processing Corporation**
Address City IN Zip: **Plant 1: 3555 Madison Avenue, Indianapolis, Indiana 46227**
Plant 2: 3750 South Shelby Street, Indianapolis, Indiana 46227
Permit Number: **R097-23537-00593**
Reviewer: **M. Caraher**
Date: **11/3/2006**

Emission Unit 08 - ICM Superhone using Glass Shot

Table 1 - Emission Factors for Abrasives

	Emission Factor	
Abrasive	lb PM / lb abrasive	lb PM10 / lb PM
Sand	0.041	0.70
Grit	0.010	0.70
Steel Shot	0.004	0.86
Other	0.010	

Table 2 - Density of Abrasives (lb/ft3)

Abrasive	Density (lb/ft3)
Al oxides	160
Sand	99
Steel	487
Glass	162

Table 3 - Sand Flow Rate (FR1) Through Nozzle (I

Flow rate of Sand Through a Blasting Nozzle as a Function of Nozzle pressure and Internal Di

	Nozzle Pressure (psig)							
Internal dian	30	40	50	60	70	80	90	100
1/8	28	35	42	49	55	63	70	77
3/16	65	80	94	107	122	135	149	165
1/4	109	138	168	195	221	255	280	309
5/16	205	247	292	354	377	420	462	507
3/8	285	355	417	477	540	600	657	720
7/16	385	472	560	645	755	820	905	940
1/2	503	615	725	835	945	1050	1160	1265
5/8	820	990	1170	1336	1510	1680	1850	2030
3/4	1140	1420	1670	1915	2160	2400	2630	2880
1	2030	2460	2900	3340	3780	4200	4640	5060

Calculations

Adjusting Flow Rates for Different Abrasives and Nozzle Diameters

Flow Rate (FR) = Abrasive flow rate (lb/hr) with internal nozzle diameter (ID)	
FR1 = Sand flow rate (lb/hr) with internal nozzle diameter (ID1) From Table 3 =	221
D = Density of abrasive (lb/ft3) From Table 2 =	162
D1 = Density of sand (lb/ft3) =	99
ID = Actual nozzle internal diameter (in) =	0.25
ID1 = Nozzle internal diameter (in) from Table 3 =	0.25

Flow Rate (FR) (lb/hr) = **361.636** per nozzle

Uncontrolled Emissions (E, lb/hr)

EF = emission factor (lb PM/ lb abrasive) From Table 1 =				0.010	
FR = Flow Rate (lb/hr) =				361.64	
w = fraction of time of wet blasting =				0	%
N = number of nozzles =				1	
Integral Cyclone Efficiency =	90 %				
Baghouse Efficiency =	99 %		**PM**	**PM10**	
		PTE After Integral Cyclone =	**0.36**	**0.36**	**lbs/hr**
			1.58	**1.58**	**tons/yr**

		PM	**PM10**	
METHODOLOGY	**Controlled Emissions =**	**0.00**	**0.00**	**lbs/hr**
		0.02	**0.02**	**tons/yr**

Emission Factors from STAPPA/ALAPCO "Air Quality Permits", Vol. I, Section 3 "Abrasive Blasting" (1991 edition)
Ton/yr = lb/hr X 8760 hr/yr X ton/2000 lb
Flow Rate (FR) (lb/hr) = FR1 x (ID/ID1)2 x (D/D1)
E = EF x FR x (1-w/200) x N
w should be entered in as a whole number (if w is 50%, enter 50)

Appendix A: Emissions Calculations

Coating Booth in Plant 2

Company Name: **CTP, Division of Tube Processing Corporation**
Address City IN Zip: **Plant 1: 3555 Madison Avenue, Indianapolis, Indiana 46227**
Plant 2: 3750 South Shelby Street, Indianapolis, Indiana 46227
Permit Number: **R097-23537-00593**
Reviewer: **M. Caraher**
Date: **11/3/2006**

Description of Coating Operation:

CTP has 1 small booth enclosure for applying a heat resistant coating by brush to metal joints.

Coating Information:

Coating Name	AL2402 Heat Resistant Aluminum Silicone Alkyd
Coating Manufacturer	Insl-x Products Corp.
Specific Gravity (1)	0.97
Coating Density [lb/gal] (2)	8.12
VOC Content [wt. %] (3)	59.84%
VOC Content [lb/gal] (1)	4.86
Volatile Content [wt. %] (1)	59.87%
Solids Content [wt. %] (4)	40.13%
HAP Content [wt. %] - Toluene (CAS# 108-88-3) (1)	0.55%
HAP Content [wt. %] - Cumene (CAS# 98-82-8) (1)	0.42%
Max. Coating Usage [gal/wk]	1.0
Avg. Painting Time [hr/wk]	45
Max. Coating Usage [gal/hr] (5)	0.022
Max. Coating Usage [lb/hr] (6)	0.18

Potential Emissions:

Potential VOC Emissions [lb/hr] (7)	0.11
Potential VOC Emissions [lb/day] (8)	2.6
Potential VOC Emissions [tpy] (9)	0.47
Potential HAP Emissions [lb/hr] - Toluene (7)	9.9E-04
Potential HAP Emissions [lb/day] - Toluene (8)	2.4E-02
Potential HAP Emissions [tpy] - Toluene (9)	4.3E-03
Potential HAP Emissions [lb/hr] - Cumene (7)	7.6E-04
Potential HAP Emissions [lb/day] - Cumene (8)	1.8E-02
Potential HAP Emissions [tpy] - Cumene (9)	3.3E-03
Potential Combined HAP Emissions [lb/hr] (10)	1.8E-03
Potential Combined HAP Emissions [lb/day] (10)	4.2E-02
Potential Combined HAP Emissions [tpy] (10)	7.7E-03

Additional Information:

(1) This data was obtained from the manufacturer's MSDS for this product.

(2) Coating Density [lb/gal] = Specific Gravity x 8.34 lb/gal

(3) VOC Content [wt. %] = VOC Content [lb/gal] / Product Density [lb/gal]

(4) Solids Content [wt. %] = 100% - Volatile Content [wt. %]

(5) Max. Coating Usage [gal/hr] = Max. Coating Usage [gal/wk] / Avg. Painting Time [hr/wk]

(6) Max. Coating Usage [lb/hr] = Max. Coating Usage [gal/hr] x Product Density [lb/gal]

(7) Potential VOC/HAP Emissions [lb/hr] = Max. Usage [lb/hr] x VOC/HAP Content [wt. %]

(8) Potential VOC/HAP Emissions [lb/day] = Potential VOC/HAP Emissions [lb/hr] x 24 hr/day

(9) Potential VOC/HAP Emissions [tpy] = Potential VOC/HAP Emissions [lb/hr] x 8,760 hr/yr / 2,000 lb/ton

(10) The combined HAP emission rates equal the sum of the toluene and cumene emission rates.

Appendix A: Emissions Calculations

Welding in Plant 2

Company Name: CTP, Division of Tube Processing Corporation
Address City IN Zip: Plant 1: 3555 Madison Avenue, Indianapolis, Indiana 46227
Plant 2: 3750 South Shelby Street, Indianapolis, Indiana 46227
Permit Number: R097-23537-00593
Reviewer: M. Caraher
Date: 11/3/2006

Welding Operation Description:

CTP (Plant 2) has fourteen (14) welding stations, consisting of nine (9) MIG (GMAW) stations and five (5) TIG (GTAW) stations installed in the mid-1990s. All welding stations are controlled with dust collectors exhausting inside the building.

Potential Emissions:

Welding Type	Electrode Type	2005 Electrode Usage [lb/yr]	Maximum Electrode Usage [lb/yr] (1)	Maximum Electrode Usage [lb/hr] (2)	Percent of Electrode Converted to Fume [%] (3)	Percent of Manganese in Fume [%] (3)	Percent of Chromium in Fume [%] (3)	Percent of Nickel in Fume [%] (3)	Potential PM/PM_{10} Emissions [tpy] (4)	Potential Manganese Emissions [tpy] (5)	Potential Chromium Emissions [tpy] (5)	Potential Nickel Emissions [tpy] (5)	Combined HAP Emissions (tpy)
GMAW	ER70S-3	30,614	92,795	10.59	0.6%	7.7%	N/A	N/A	2.78E-01	2.14E-02	N/A	N/A	
GMAW	308L	1,300	3,940	0.45	0.5%	8.7%	12.5%	5.1%	9.85E-03	8.57E-04	1.23E-03	5.02E-04	
GMAW	309L	1,590	4,820	0.55	0.5%	7.8%	13.1%	6.0%	1.20E-02	9.40E-04	1.58E-03	7.23E-04	
GMAW	316L	145	440	0.05	0.4%	11.3%	11.9%	5.0%	8.79E-04	9.93E-05	1.05E-04	4.40E-05	
GMAW	ER4043 / ER5356	1,060	3,213	0.37	5.1%	0.01%	N/A	N/A	8.19E-02	8.19E-06	N/A	N/A	
		34,709	105,208	12				**TOTAL**	**0.383**	**0.023**	**0.003**	**0.001**	**0.028**

Additional Information:

(1) Maximum Electrode Usage [lb/yr] = 2005 Electrode Usage x 8,760 hr/yr / (17 hr/day x 5 day/wk x 51 wk/yr) x 1.5 Safety Factor

(2) Maxium Electrode Usage [lb/hr] = Maximum Electrode Usage [lb/yr] / 8,760 hr/yr

(3) Percent of electrode converted to fume and percent of manganese, chromium, and nickel in fume were obtained from the "Guide for Estimating Welding Emissions for EPA and Ventilation Permit Reporting" published by the American Welding Society. Refer to Attachment 3.

(4) Potential PM/PM_{10} Emissions [tpy] = Maximum Electrode Usage [lb/hr] x Percent of Electrode Converted to Fume [%] x 8,760 hr/yr / 2,000 lb/ton

(5) Potential Mn, Cr & Ni Emissions [tpy] = Potential PM/PM_{10} Emissions [tpy] x Percent of Mn, Cr & Ni in Fume [%]

Electrode usage per day = Electrode Usage (lb/yr) / 365 days = 95 lbs/day

Appendix A: Emissions Calculations

Parts Washer in Plant 2

Company Name: CTP, Division of Tube Processing Corporation
Address City IN Zip: Plant 1: 3555 Madison Avenue, Indianapolis, Indiana 46227
Plant 2: 3750 South Shelby Street, Indianapolis, Indiana 46227
Permit Number: R097-23537-00593
Reviewer: M. Caraher
Date: 11/3/2006

Parts Washer Description:

CTP has one (1) parts washer installed in the 1980s with 30 gallon capacity of solvent located in the Maintenance Department.

Solvent Data:

Solvent Name	Specific Gravity (1)	Product Density [lb/gal] (2)	VOC Content [lb/gal] (3)
Naphtha Solvent	0.76	6.3	6.3

Potential Emissions:

Typical Annual Solvent Usage [gal/yr]	Max. Annual Solvent Usage [gal/yr] (4)	Max. Hourly Solvent Usage [gal/hr] (5)	Potential VOC Emissions [lb/hr] (6)	Potential VOC Emissions [tpy] (7)
60	90	0.010	0.065	0.29

Additional Information:

(1) The specific gravity of 0.76 was obtained from ChemFinder.com for Naphtha [CAS# 8030-30-6]

(2) Product Density [lb/gal] = Specific Gravity x 8.34 lb/gal

(3) Conservatively assumed that the Naphtha Solvent is 100% VOC.

(4) Increased the typical annual solvent usage by 50% to estimate a maximum annual solvent usage.

(5) Max. Hourly Solvent Usage [gal/hr] = Max. Annual Solvent Usage [gal/yr] / 8,760 hr/yr

(6) Potential VOC Emissions [lb/hr] = Max. Hourly Solvent Usage [gal/hr] x VOC Content [lb/gal]

(7) Potential VOC Emissions [tpy] = Potential VOC Emissions [lb/hr] x 8,760 hr/yr / 2,000 lb/ton

Appendix A: Emissions Calculations
Natural Gas Combustion Only
MM BTU/HR <100
Space Heating in Plant 2

Company Name: **CTP, Division of Tube Processing Corporation**
Address City IN Zip: **Plant 1: 3555 Madison Avenue, Indianapolis, Indiana 46227**
Plant 2: 3750 South Shelby Street, Indianapolis, Indiana 46227
Permit Number: **R097-23537-00593**
Reviewer: **M. Caraher**
Date: **11/3/2006**

Heat Input Capacity MMBtu/hr	Potential Throughput MMCF/yr
1.35	11.83

	Pollutant					
	PM*	PM10*	SO2	NOx	VOC	CO
Emission Factor in lb/MMCF	1.9	7.6	0.6	100.0 **see below	5.5	84.0
Potential Emission in tons/yr	0.01	0.04	0.00	0.59	0.03	0.50
Potential Emission in lbs/hr	0.003					

*PM emission factor is filterable PM only. PM10 emission factor is filterable and condensable PM10 combined.
**Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

Methodology

All emission factors are based on normal firing.
MMBtu = 1,000,000 Btu
MMCF = 1,000,000 Cubic Feet of Gas

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu
Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03 (SUPPLEMENT D 3/98)
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

See next page for HAPs emissions calculations.

Appendix A: Emissions Calculations
Natural Gas Combustion Only
MM BTU/HR <100
Space Heating

Company Name: CTP, Division of Tube Processing Corporation
Address City IN Zip: Plant 1: 3555 Madison Avenue, Indianapolis, Indiana 46227
Plant 2: 3750 South Shelby Street, Indianapolis, Indiana 46227
Permit Number: R097-23537-00593
Reviewer: M. Caraher
Date: 11/3/2006

	HAPs - Organics					
	Benzene	Dichlorobenzene	Formaldehyde	Hexane	Toluene	
Emission Factor in lb/MMCF	2.1E-03	1.2E-03	7.5E-02	1.8E+00	3.4E-03	
						Combined HAPs
Potential Emission in tons/yr	1.242E-05	7.096E-06	4.435E-04	1.064E-02	2.010E-05	1.113E-02

	HAPs - Metals					
	Lead	Cadmium	Chromium	Manganese	Nickel	
Emission Factor in lb/MMCF	5.0E-04	1.1E-03	1.4E-03	3.8E-04	2.1E-03	
Potential Emission in tons/yr	2.957E-06	6.504E-06	8.278E-06	2.247E-06	1.242E-05	3.240E-05
						1.116E-02

Methodology is the same as previous page.

The five highest organic and metal HAPs emission factors are provided above.
Additional HAPs emission factors are available in AP-42, Chapter 1.4.

Appendix A: Emissions Calculations
Natural Gas Combustion Only
MM BTU/HR <100
Space Heating in Plant 1

Company Name: **CTP**
Address City IN Zip: **Plant 1: 3555 Madison Avenue, Indianapolis, Indiana 46227**
Plant 2: 3750 South Shelby Street, Indianapolis, Indiana 46227
Permit Number: **R097-23537-00593**
Reviewer: **M. Caraher**
Date: **2/23/2007**

Heat Input Capacity MMBtu/hr	Potential Throughput MMCF/yr
5.98	52.4

	Pollutant					
	PM*	PM10*	SO2	NOx	VOC	CO
Emission Factor in lb/MMCF	1.9	7.6	0.6	100.0 **see below	5.5	84.0
Potential Emission in tons/yr	0.050	0.2	0.016	2.6	0.1	2.2
Potential Emission in lbs/hr	0.01					

*PM emission factor is filterable PM only. PM10 emission factor is filterable and condensable PM10 combined.
**Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 3

Methodology

All emission factors are based on normal firing.
MMBtu = 1,000,000 Btu
MMCF = 1,000,000 Cubic Feet of Gas

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBt
Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03
(SUPPLEMENT D 3/98)
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

See next page for HAPs emissions calculations.

Appendix A: Emissions Calculations
Natural Gas Combustion Only
MM BTU/HR <100
Space Heating in Plant 1

Company Name: **CTP**
Address City IN Zip: **Plant 1: 3555 Madison Avenue, Indianapolis, Indiana 46227**
Plant 2: 3750 South Shelby Street, Indianapolis, Indiana 46227
Permit Number: **R097-23537-00593**
Reviewer: **M. Caraher**
Date: **2/23/2007**

	HAPs - Organics					
	Benzene	Dichlorobenzene	Formaldehyde	Hexane	Toluene	
Emission Factor in lb/MMCF	2.1E-03	1.2E-03	7.5E-02	1.8E+00	3.4E-03	
						Combined HAPs
Potential Emission in tons/yr	5.500E-05	3.143E-05	1.964E-03	4.715E-02	8.905E-05	4.929E-02

	HAPs - Metals					
	Lead	Cadmium	Chromium	Manganese	Nickel	
Emission Factor in lb/MMCF	5.0E-04	1.1E-03	1.4E-03	3.8E-04	2.1E-03	
Potential Emission in tons/yr	1.310E-05	2.881E-05	3.667E-05	9.953E-06	5.500E-05	1.435E-04
						4.943E-02

Methodology is the same as previous page

The five highest organic and metal HAPs emission factors are provided above.
Additional HAPs emission factors are available in AP-42, Chapter 1.4.

Welding in Plant 1

Company Name: CTP
Address City IN Zip: Plant 1: 3555 Madison Avenue, Indianapolis, Indiana 46227
Plant 2: 3750 South Shelby Street, Indianapolis, Indiana 46227
Permit Number: R097-23537-00593
Reviewer: M. Caraher
Date: 2/23/2007

PROCESS	Number of Stations	Max. electrode consumption per station (lbs/hr)		EMISSION FACTORS* (lb pollutant/lb electrode)				EMISSIONS (lbs/hr)				HAPS (lbs/hr)
WELDING				PM = PM10	Mn	Ni	Cr	PM = PM10	Mn	Ni	Cr	
Submerged Arc	0	0		0.036	0.011			0.000	0.000	0.000	0	0.000
Metal Inert Gas (MIG)(carbon steel)	3	1.5		0.0055	0.0005			0.025	0.002	0.000	0	0.002
Stick (E7018 electrode)	0	0		0.0211	0.0009			0.000	0.000	0.000	0	0.000
Tungsten Inert Gas (TIG)(carbon steel)	15	0.59		0.0055	0.0005			0.049	0.004	0.000	0	0.004
Oxyacetylene(carbon steel)	0	0		0.0055	0.0005			0.000	0.000	0.000	0	0.000
Total Electrode Consumption (lbs/day)		50.16										
	Number of Stations	Max. Metal Thickness Cut (in.)	Max. Metal Cutting Rate (in./minute)	EMISSION FACTORS (lb pollutant/1,000 inches cut, 1" thick)**				EMISSIONS (lbs/hr)				HAPS (lbs/hr)
FLAME CUTTING				PM = PM10	Mn	Ni	Cr	PM = PM10	Mn	Ni	Cr	
Oxyacetylene	0	0	0	0.1622	0.0005	0.0001	0.0003	0.000	0.000	0.000	0.000	0.000
Oxymethane	0			0.0815	0.0002		0.0002	0.000	0.000	0.000	0.000	0.000
Plasma**	0	0	0	0.0039				0.000	0.000	0.000	0.000	0.000
EMISSION TOTALS												
Potential Emissions lbs/hr								0.07				0.01
Potential Emissions lbs/day								1.76				0.16
Potential Emissions tons/year								0.32				0.03

METHODOLOGY

*Emission Factors are default values for carbon steel unless a specific electrode type is noted in the Process column.

**Emission Factor for plasma cutting from American Welding Society (AWS). Trials reported for wet cutting of 8 mm thick mild steel with 3.5 m/min cutting speed (at 0.2 g/min emitted). Therefore, the emission factor for plasma cutting is for 8 mm thick rather than 1 inch, and the maximum metal thickness is not used in calculting the emissions.

Using AWS average values: (0.25 g/min)/(3.6 m/min) x (0.0022 lb/g)/(39.37 in./m) x (1,000 in.) = 0.0039 lb/1,000 in. cut, 8 mm thick

Plasma cutting emissions, lb/hr: (# of stations)(max. cutting rate, in./min.)(60 min./hr.)(emission factor, lb. pollutant/1,000 in. cut, 8 mm thick)

Cutting emissions, lb/hr: (# of stations)(max. metal thickness, in.)(max. cutting rate, in./min.)(60 min./hr.)(emission factor, lb. pollutant/1,000 in. cut, 1" thi

Welding emissions, lb/hr: (# of stations)(max. lbs of electrode used/hr/station)(emission factor, lb. pollutant/lb. of electrode used)

Emissions, lbs/day = emissions, lbs/hr x 24 hrs/day

Emissions, tons/yr = emissions, lb/hr x 8,760 hrs/year x 1 ton/2,000 lbs.

Appendix A: Emissions Calculations
Parts Washer/Deburring in Plant 1

Company Name:	**CTP**
Address City IN Zip:	**Plant 1: 3555 Madison Avenue, Indianapolis, Indiana 46227**
	Plant 2: 3750 South Shelby Street, Indianapolis, Indiana 46227
Permit Number:	**R097-23537-00593**
Reviewer:	**M. Caraher**
Date:	**2/23/2007**

Parts Washer

Max amount used is:	0.25	gallons/hour
VOC % by weight is:	10%	%
Density of cleaner is:	9.16	pounds/gallon

Potential to Emit	**0.23**	**pounds/hr**
	1.00	**tons/year**

Methodology

VOC pounds per hour = density of cleaner x VOC % by weight x usage in gallons/hr

VOC tons per year = VOC pounds per hour emitted x 8760 hours/year x ton/2000 pounds

Deburring - Trivial Activity pursuant to 326 IAC 2-7-1(40)(f) = PM/PM10 < 1 pound per day

Potential to Emit:

1 pound per day x 365 days/year x ton/2000 pounds x 2 stations =	**0.37**	**tons /year**
1 pound per day x day/24 hours x 2 stations =	**0.08**	**pounds/hr**

Appendix A: Emissions Calculations Summary

Company Name: CTP
Address City IN Zip: Plant 1: 3555 Madison Avenue, Indianapolis, Indiana 46227
Plant 2: 3750 South Shelby Street, Indianapolis, Indiana 46227
Permit Number: R097-23537-00593
Reviewer: M. Caraher
Date: 2/23/2007

Plant 1 (Madison Avenue) Potential Emissions Summary:

	Air Pollutants [tpy]								
Emitting Activities	CO	Pb	NO_X	PM	PM_{10}	SO_2	VOC	Highest Single HAP	Combined HAPs
Welding	N/A	N/A	N/A	0.32	0.32	N/A	NA	0.004	0.03
Deburring/Metal Presses	N/A	N/A	N/A	0.37	0.37	N/A	N/A	N/A	N/A
Parts Washer	N/A	N/A	N/A	N/A	N/A	N/A	1.00	0.00	0.00
Space Heaters	2.20	0.00	2.62	0.05	0.20	0.02	0.14	0.05	0.05
Total	**2.20**	**0.00**	**2.62**	**0.74**	**0.89**	**0.02**	**1.15**	**0.05**	**0.079**

Plant 2 (Shelby Street) Potential Emissions Summary:

	Air Pollutants [tpy]								
Emitting Activities	CO	Pb	NO_X	PM	PM_{10}	SO_2	VOC	Highest Single HAP	Combined HAPs
Wash Lines	N/A	N/A	N/A	N/A	N/A	N/A	2.21	N/A	N/A
Abrasive Blasting	N/A	N/A	N/A	6.76	6.03	N/A	N/A	N/A	N/A
Coating Booth	N/A	N/A	N/A	N/A	N/A	N/A	0.47	0.004	0.008
Welding	N/A	N/A	N/A	0.38	0.38	N/A	N/A	0.023	0.028
Parts Washer	N/A	N/A	N/A	N/A	N/A	N/A	0.29	N/A	N/A
Space Heaters	0.50	0.00	0.59	0.01	0.04	0.00	0.03	0.01	0.01
Brazing	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	**0.50**	**0.00**	**0.59**	**7.15**	**6.46**	**0.00**	**3.00**	**0.02**	**0.046**
Source Wide Total	**2.70**	**0.00**	**3.21**	**7.89**	**7.34**	**0.02**	**4.14**	**0.05**	**0.13**